**King Saud University**

**College of Computer & Information Science**

**CSC111 – Tutorial04**

**Expressions, operators, conditional statement**

**All Sections**

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# Objectives:

1. Student should learn how to write expressions and use operators according to precedence rules.
2. Student should learn when and how to use conditional statement

# Exercise 1

1. Which of the following expressions results in 45.37?
   1. (int)(45.378 \* 100) / 100
   2. (int)(45.378 \* 100) / 100.0
   3. (int)(45.378 \* 100 / 100)
   4. (int)(45.378) \* 100 / 100.0
2. What is y displayed?

public class Test {

  public static void main(String[] args) {

    int x = 1;

    int y = x + x++;

    System.out.println("y is " + y);

  }

}

1. y is 1.
2. y is 2.
3. y is 3.
4. y is 4.
5. What is the value of i printed in the following code?

public class Test {

  public static void main(String[] args) {

    int j = 0;

    int i = ++j + j \* 5;

    System.out.println("What is i? " + i);

  }

}

* 1. 0
  2. 1
  3. 5
  4. 6

1. Assuming that **x** is **1**, show the result of the following Boolean expressions:
   1. (x > **0**)
   2. (x < **0**)
   3. (x != **0**)
   4. (x >= **0**)
   5. (x != **1**)

# Solution

1. b
2. b
3. d
   1. true
   2. false
   3. true
   4. true
   5. false

# Exercise 2

Write a program that declares two integer variables **x** and **y** and initializes their values to **0**. Then it reads the value of variable **y** and assigns **1** to **x** if **y** is greater than **0**. Finally it prints the value of variable **x**.

Here are two sample runs:

Enter value of y: 5 **↵**

Value of x is 1

# Solution

Enter value of y: 0 **↵**

Value of x is 0

**import** java.util.Scanner;

**public** **class** TestIf {

**public** **static** **void** main(String[] args) {

Scanner reader = **new** Scanner(System.***in***);

**int** x = 0, y = 0;

System.***out***.print("Enter value of y: ");

y = reader.nextInt();

**if** (y > 0){

x = 1;

}

System.***out***.println("Value of x is " + x);

}

}

# Exercise 3

Write a program that reads the performance level of an employee (between 0 and 100) and his salary. Then it increases the salary by 3% if performance level is grater than or equal to 90.

Here are two sample runs:

Enter performance level: 50 **↵**

Enter base salary: 5000 **↵**

Salary is 5000.0

# Solution

Enter performance level: 90 **↵**

Enter base salary: 10000 **↵**

Salary is 10300.0

**import** java.util.Scanner;

**public** **class** ComputeSalary {

**public** **static** **void** main(String[] args) {

Scanner reader = **new** Scanner(System.***in***);

**double** perf, sal;

System.***out***.print("Enter performance level: ");

perf = reader.nextDouble();

System.***out***.print("Enter base salary: ");

sal = reader.nextDouble();

**if** (perf >= 90){

sal += sal \* 3/100;

}

System.***out***.println("Salary is " + sal);

}

}

**Done…**